

Work Order ID 66008

Tuesday, February 01, 2011 1:16:34 PM



Page 1

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: UMF

Date: 11-02-01 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
----------	--------------

D3391

Rev H/ DEO

100



MORI SEIKI CNC LATHE LARGE

Mori Seiki

Mori Seiki CNC Lathe Large

Memo

Turn as per Folio FA599

Rev: A4 & Dwg D3391 Rev: H

110



QC2- Inspect parts off machine FAI/FAIB

QC

Quality Control

Memo

0.00

SL 11/02/08

111



QC8- Inspect parts - second check

QC

Quality Control

Memo

0.00

ark 11/02/08

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Tuesday, February 01, 2011 1:16:34 PM



Page 2

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

120

Operation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

0.00

HAAS CNC VERTICAL MACHINING #1

HAAS I

0.00

1-Machine as per Folio FA 599 Rev: A4 & Dwg D3391 Rev: H

2-Deburr

arh 11/02/10

130



QC2- Inspect parts off machine FAI/FAIB

0.00

0.00

arh 11/02/10

QC

Quality Control

140



QC8- Inspect parts - second check

0.00

0.00

D 11.2.15

QC

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Tuesday, February 01, 2011 1:16:34 PM



Page 3

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150



Skidtubes

0.00

DP

11-2-23

Skidtubes

Memo

0.00

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

160



BENDING MACHINE - SKIDTUBES

0.00

DP

11-2-23

CNC Bend 1

CNC Delta 100 Bender

Memo

0.00

Form as per Dwg D3391 Using Bend Prog 3391025

170



QC5- Inspect part completeness to step on W/O

0.00

4.275"

QC

Quality Control

Memo

0.00

① Ø 2E11/02/23

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section-C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Tuesday, February 01, 2011 1:16:34 PM



Page 4

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

180

Operation
Description

Skidtubes

Skidt

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Page 5

Tuesday, February 01, 2011 1:16:34 PM

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

QC: _____

Date: _____

Tooling: _____

SPC (Y/N): _____

Date: _____

Date: _____

Run Start



Stop

Sequence ID/
Work Center ID

190



QC

Quality Control

Operation
Description

QC5- Inspect part completeness to step on W/O

Set Up/
Run Hours

0.00

8 Mar/27

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

200



HandFinish

Hand Finishing

Chemical Conversion Coat per QSI005 4.1

0.00

0.00

1

BB(1/04/27)

210



QC

Quality Control

QC3- Inspect Part Finish

0.00

0.00

1

8 BE/04/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Page 6

Tuesday, February 01, 2011 1:16:34 PM

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

220

Operation
Description

Skidtubes

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Skidtubes

Skidtubes

Memo

Instal spacers as per dwg D3391
A/R Magnabond 6398 Batch: m116678
exp. date: 08/2011
cure time 12hrs as per QSI0015

1 2 881/04/27

230



QC5- Inspect part completeness to step on W/O

0.00

S. Warkas

QC

Quality Control

0.00

Q

235



Pressure Wash per QSI005 4.3

0.00

HandFinish

Memo

AND REALODINE AS PER PAR09-043

1 4 M 110425

Hand Finishing

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Page 7

Tuesday, February 01, 2011 1:16:34 PM

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

240



Powdercoat

Powder Coating

Operation
Description

White Gloss(Ref.4.3.5.1) per QSI005 4.3-Alum

M116964.

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

250



QC

Quality Control

QC3- Inspect Part Finish

0.00

1 BL 11-4-28.

0.00

1 φ 11-4-29

260



HandFinish

Hand Finishing

HandFinishing

0.00

Memo

0.00

1-Install inserts as per Dwg D3391

2-Install Aft Cap as per Dwg D3391

A/R Sikaflex-241/-291 M116918.

Sikaflex expiry date: 12-15-01

1 BL 11-4-29.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 66008

Page 8

Tuesday, February 01, 2011 1:16:34 PM

Item ID: D3391-025

Accept



Setup Start



Revision ID:

Item Name: Aft Tube Assembly

Stop



Start Date: 2/2/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/16/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center ID

270



QC

Quality Control

Operation
Description

QC5- Inspect part completeness to step on W/O

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

ml 11 04 29 0

280



Packaging

Packaging

Identify as per dwg & Stock Location: w/o

0.00

D412-742-043/B68643

0.00

1 04 29 w/o 124

290



QC

Quality Control

QC21- Final Inspection - Work Order Release

0.00

Memo

0.00

*OK w/o 129
MF
(1-04-29)*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Tuesday, February 01, 2011 1:16:28 PM

Work Order ID: 66008



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 2/2/2011

Required Date: 2/16/2011

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev B 06-02-07 ECN773 dwg rev. D EC
IPP Rev:C 06-03-28 Update Manuf. Instructions JLM □□ □□
IPP rev D 07.03.20 revF dwg EC
IPP rev E 07.11.07 rev G dwg een 1053p EC verified by: DD
IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC
IPP-Rev:G 08-09-10 revH as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6014-090 		Manufactured	No			100	Each	26.0000	1	1		SL 110208	

ALUMINUM EXTRUSION

Location	Loc Qty	Loc Code
LG	26	
56572	26	

D3670-4-200 	SPACER	Manufactured	No		230	Each	56.0000	4	4		B677774	BL 09/27	

Location	Loc Qty	Loc Code
LG	56	
57349	34	
63317	22	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 2

Tuesday, February 01, 2011 1:16:28 PM

Work Order ID: 66008



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 2/2/2011

Required Date: 2/16/2011

Start Qty: 1.00

Required Qty: 1.00

D2646



Manufactured No

270

Each

83.0000

1

1



Aft Cap

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP-4	13	
------	----	--

57332	13	
-------	----	--

FP6	16	
-----	----	--

52663	3	
-------	---	--

62678	12	
-------	----	--

63633	1	
-------	---	--

Return 2010	54	
-------------	----	--

62678	54	
-------	----	--

D3537-1



Manufactured No

270

Each

54.0000

1

1



Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP017	54	
-------	----	--

866135	54	
--------	----	--

64424	54	
-------	----	--

D3537-7



Manufactured No

270

Each

17.0000

1

1



Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
-----------------	----------------	-----------------

FP16	17	
------	----	--

56831	9	
-------	---	--

65146	8	
-------	---	--

1 BL 11-4-29

1 BL 11-4-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 3

Tuesday, February 01, 2011 1:16:28 PM

Work Order ID: 66008



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 2/2/2011

Required Date: 2/16/2011

Start Qty: 1.00

Required Qty: 1.00

D3553-1



Manufactured No

270

Each

29.0000

1

1



Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	29	
33868 ✓	1	
56568 ✓	28	

D3553-3



Manufactured No

270

Each

33.0000

1



Gasket

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP	33	
53480 ✓	33	

D3672-1



Manufactured No

270

Each

1,307.000

2



Phenolic Washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST077	1307	
42329 ✓	10	
52505 ✓	297	
64177	1000	

2 BR 11-4-29.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 4

Tuesday, February 01, 2011 1:16:29 PM

Work Order ID: 66008



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 2/2/2011

Required Date: 2/16/2011

Start Qty: 1.00

Required Qty: 1.00

ALS4-1032-130

Purchased

No

260

Each

729.0000

14

14



Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PKG11 M117331	480	
114723	480	
ST281	114	
116049	114	
ST282	96	
110511	10	
115911	86	
ST381	39	
114654	39	

14

BR 11-4-29

ALS4-1032-225

Purchased

No

270

Each

4,024.000

12



Insert

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
PK011	4024	
110768 ✓	4024	

12

BR 11-4-29

AN3C4A

Purchased

No

270

Each

2,072.000

6



BOLT

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST350 116924.	2072	
115300	25	
116075	947	
116590	100	
116704	1000	

6

BR 11-4-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 5

Tuesday, February 01, 2011 1:16:29 PM

Work Order ID: 66008



Parent Item: D3391-025



Parent Item Name: Aft Tube Assembly

Start Date: 2/2/2011

Required Date: 2/16/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C5A



Purchased

No

270

Each

946.0000

4

4



Bolt

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST350	946	
114330	11	
115015	13	
115371	18	
115422	100	
115594	6	
115835	198	
116419✓	500	
116549	100	

4 BL 11-4-29

AN960C10L



NAS1149C0332

R

Purchased

No

270

Each

25.0000

10

10



washer

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
ST245	25	
107534	25	

NAS1149C0332R

107534

M 117091

10 BL 11-4-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	66008
Description: Float Skidtube (412)	Part Number:	D3391-3
Inspection Dwg: D3391 Rev: H		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.00	/		m-tape	1
3.500	+/-0.010	3.502	/		Vern JLM	
88.93	+/-0.030	88.920	/		m-tape	
44.995	+/-0.030	44.965	/		m-tape	
Ø3.200	+/-0.010	3.203	/		Mic CNC-05	
88.93	+/-0.030	88.934	/		m-tape	
Ø3.750	+/-0.010	3.747	/		Vern JLM	
30° x 160" chamfer	+/-0.010	30° X 160"	-		"	

Measured by: DL

Date: 11/02/08

Audited by: Amf

Date: 11/02/08

HAAS Section						
1.526	+0.000/-0.030	1.520	-		Vern	ML-7
7.500	+/-0.010	7.498	-		Vern	CNC-02
27.750	+/-0.010	27.750	-		M-type	ML-2
31.750	+/-0.010	31.750	-		"	"
35.250	+/-0.010	35.257	-		"	"
3.300	+/-0.010	3.306	-		Vern	CNC-02
0.200	+/-0.010	.200	-		"	"
3.520	+/-0.010	3.524	-		Mic	JLM-4
0.687	+0.010/-0.000	0.688	-		Vern	ML-7
R0.062	+/-0.010	R.062	-		Red-gage	
Ø0.484	+0.005/-0.001	Ø.486			KJ Vern	ML-7

Measured by: Amf

Date: 11/02/10

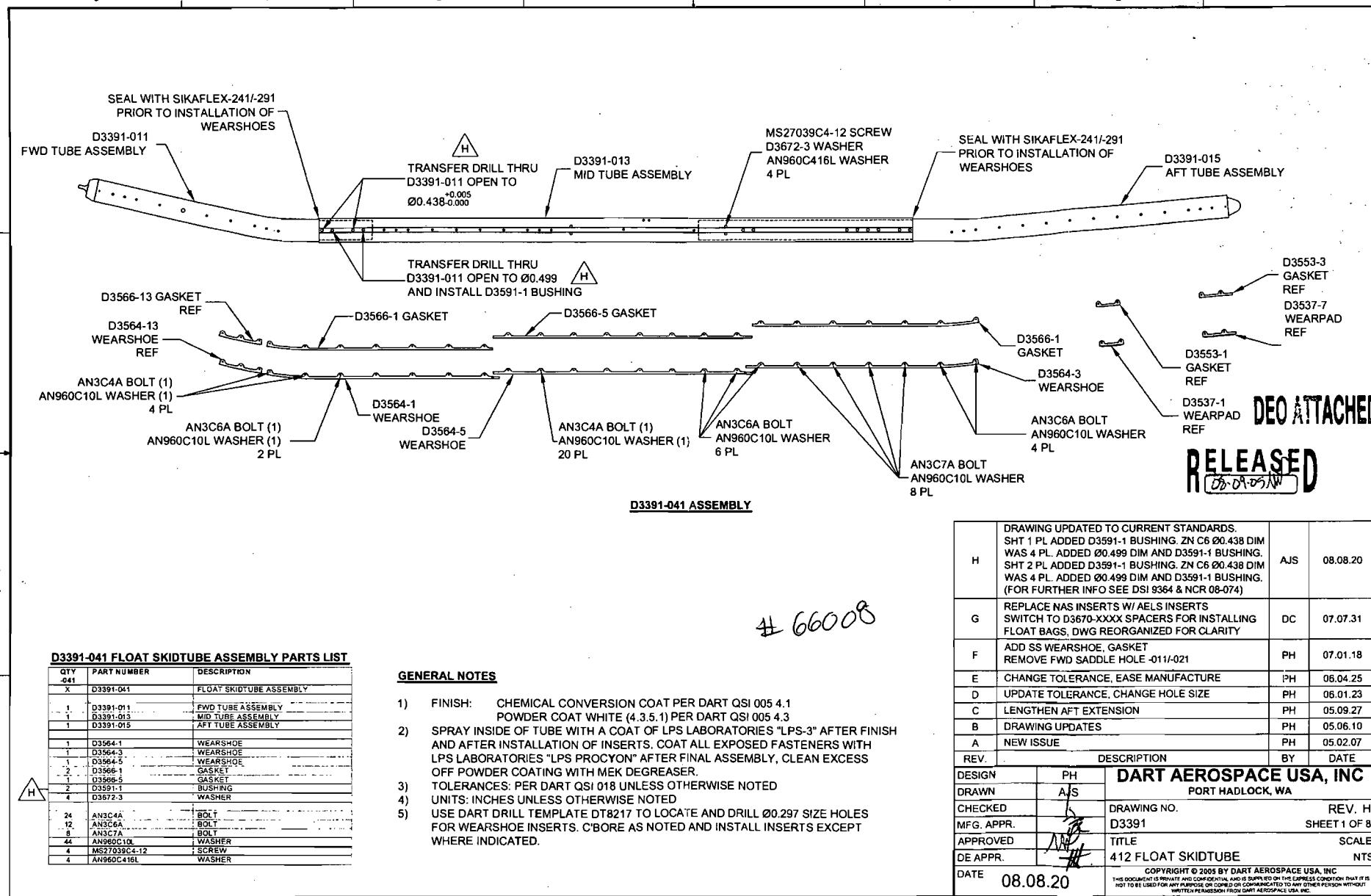
Audited by: RL

Date: 11-2-15

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	AM

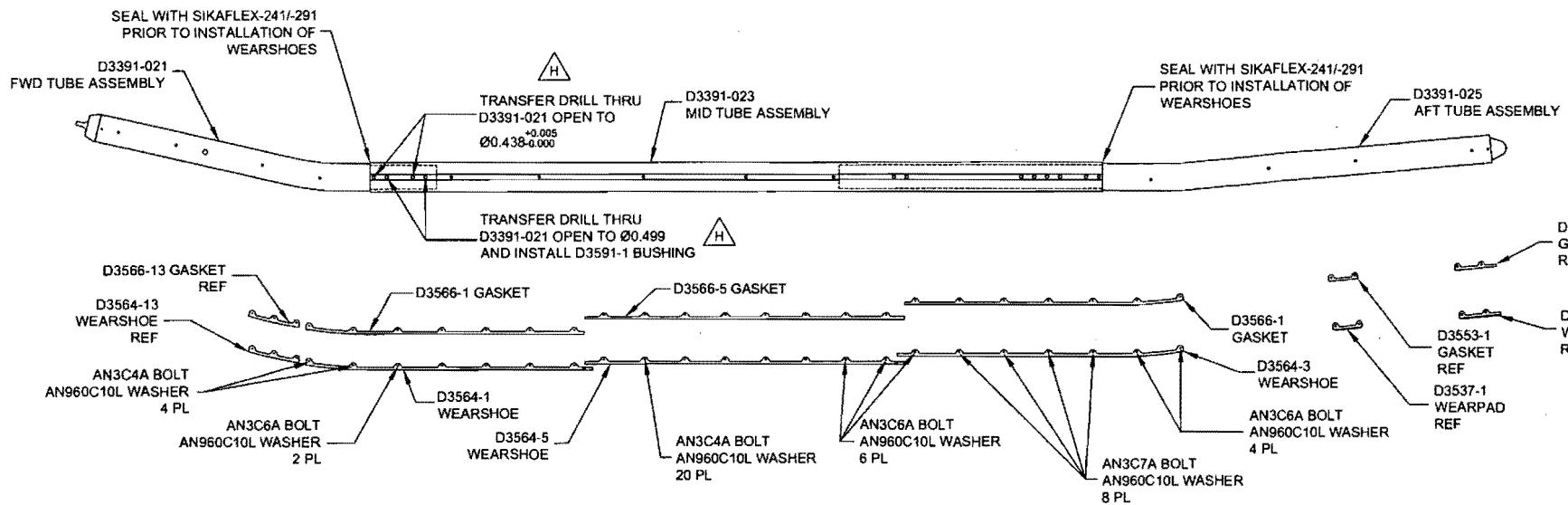


8 7 6 5 4 3 2 1



H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DS 9364 & NCR 08-074)		AJS	08.08.20
G	REPLACE NAS INSERTS W/AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS. DWG REORGANIZED FOR CLARITY		DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011-021		PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE		PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE		PH	06.01.23
C	LENGTHEN AFT EXTENSION		PH	05.09.27
B	DRAWING UPDATES		PH	05.06.10
A	NEW ISSUE		PH	05.02.07
REV.	DESCRIPTION		BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA		
DRAWN	AJS			
CHECKED		DRAWING NO.	REV. H	
MFG. APPR.		D3391	SHEET 1 OF 8	
APPROVED		TITLE	SCALE	
DE APPR.		412 FLOAT SKIDTUBE	NTS	
DATE	08.08.20			

COPYRIGHT © 2005 BY DART AEROSPACE USA, INC
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED UNDER THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY OTHER PURPOSE OR DISCLOSED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.



D3391-043 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
.043	D3391-043	FLOAT SKIDTUBE ASSEMBLY
1	D3391-021	FWD TUBE ASSEMBLY
1	D3391-023	MID TUBE ASSEMBLY
1	D3391-025	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
1	D3564-5	WEARSHOE
2	D3566-1	GASKET
2	D3566-5	GASKET
2	D3591-1	BUSHING
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL $\varnothing 0.297$ SIZE HOLES FOR WEARSHOE INSERTS. CBORE AS NOTED AND INSTALL INSERTS EXCEPT WHERE INDICATED.

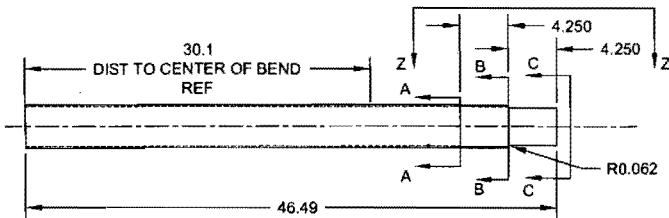
#66008

DE ATTACHED
RELEASED
08-09-25/N

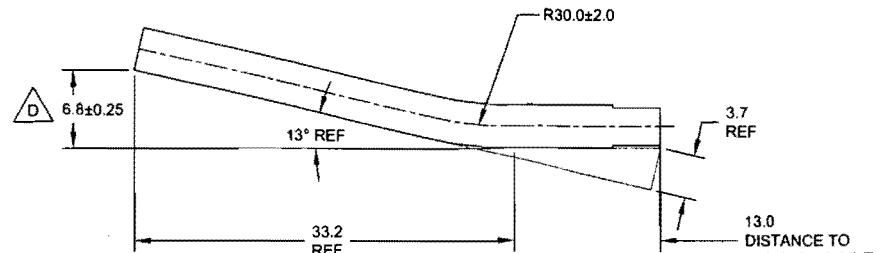
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 2 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY OTHER PURPOSE, DISCLOSED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8 7 6 5 4 3 2 1

D

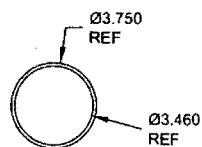


D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)

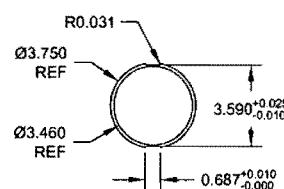


D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)

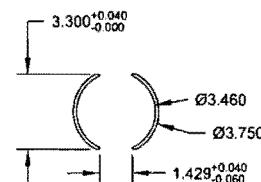
C



SECTION A-A
SCALE 2X

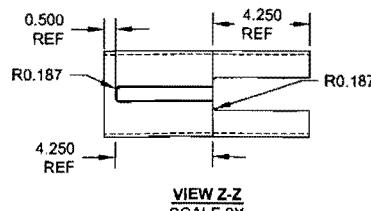


SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X

B



VIEW Z-Z
SCALE 2X

A

DEO ATTACHED

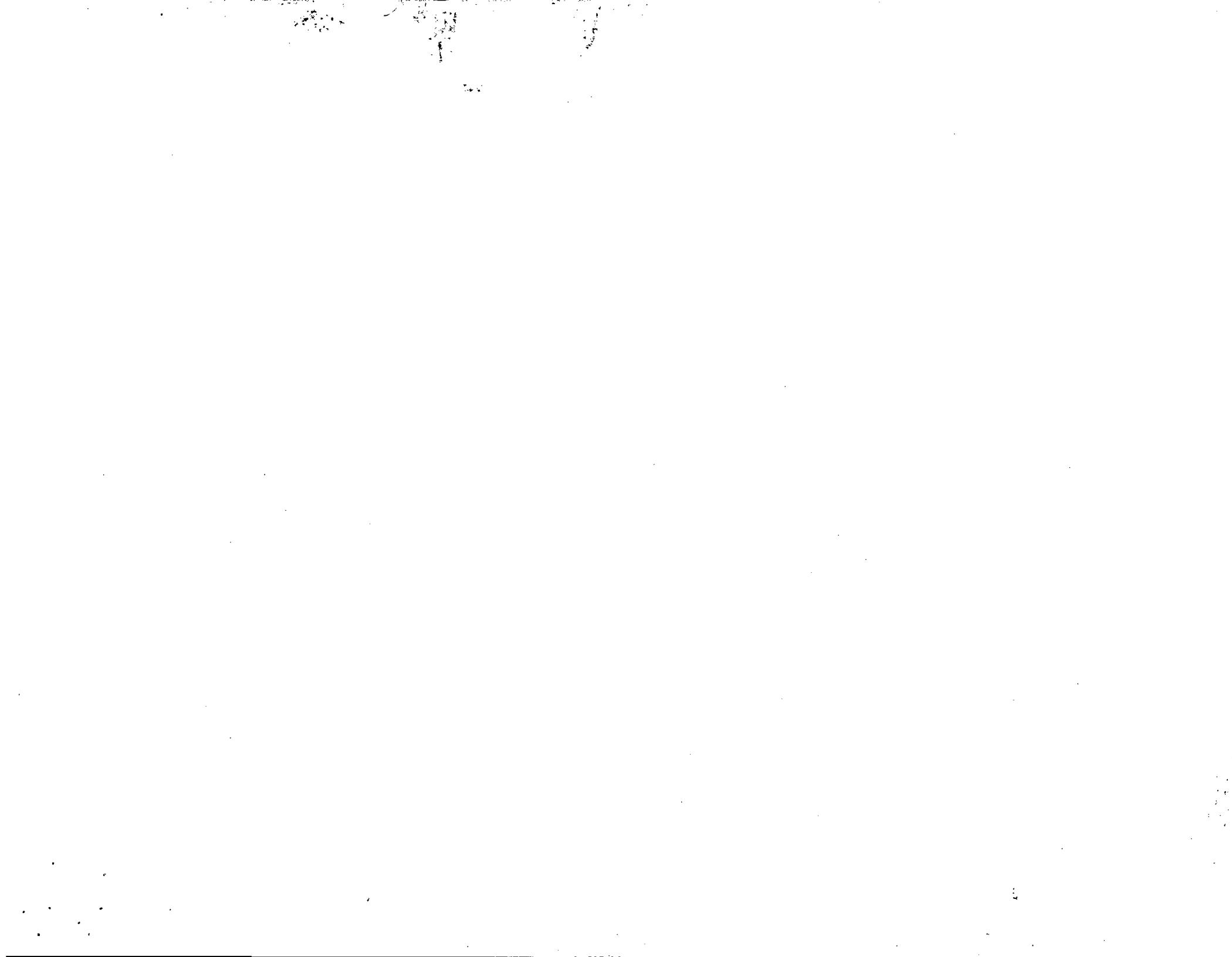
#66008

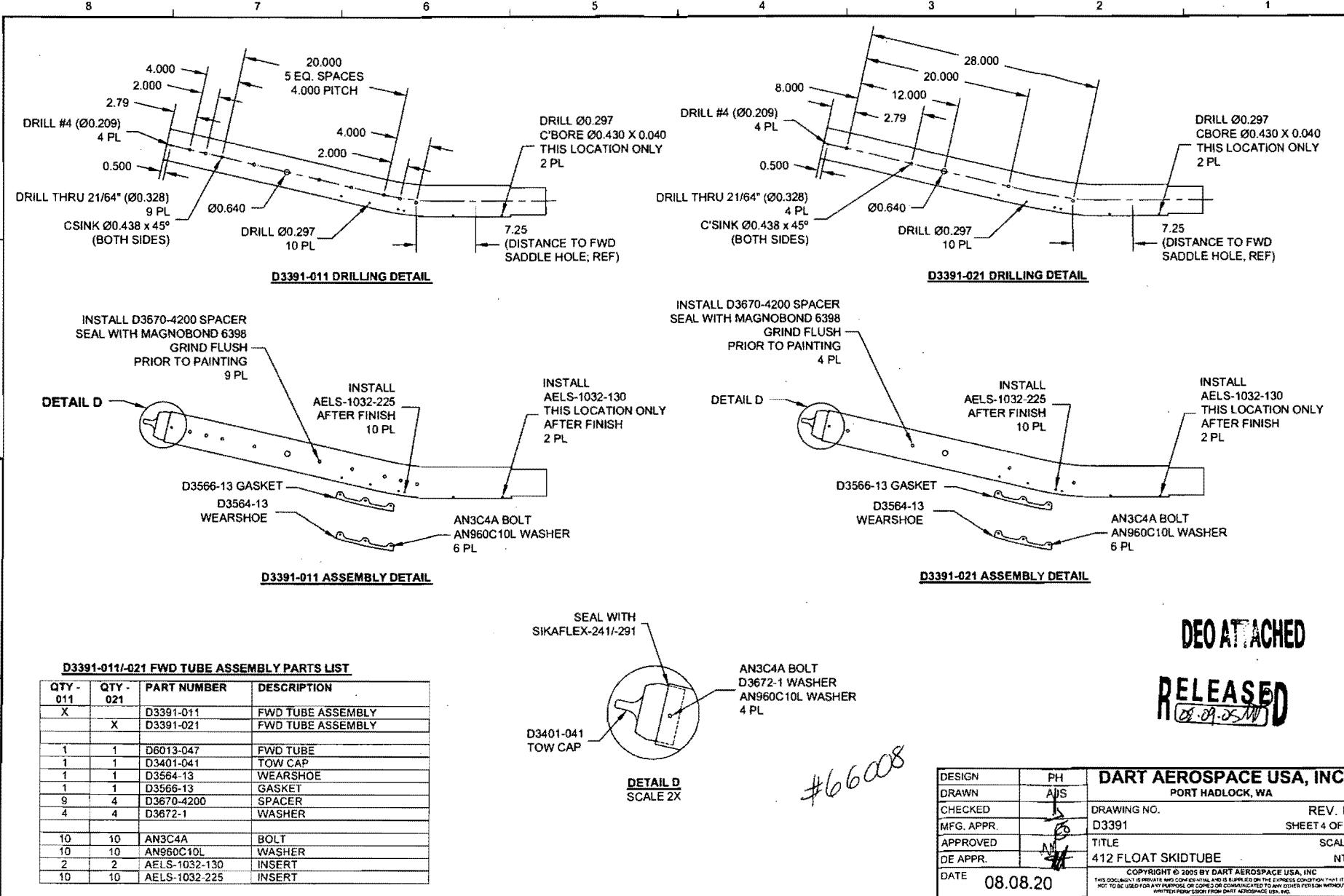
RELEASED
08.08.20

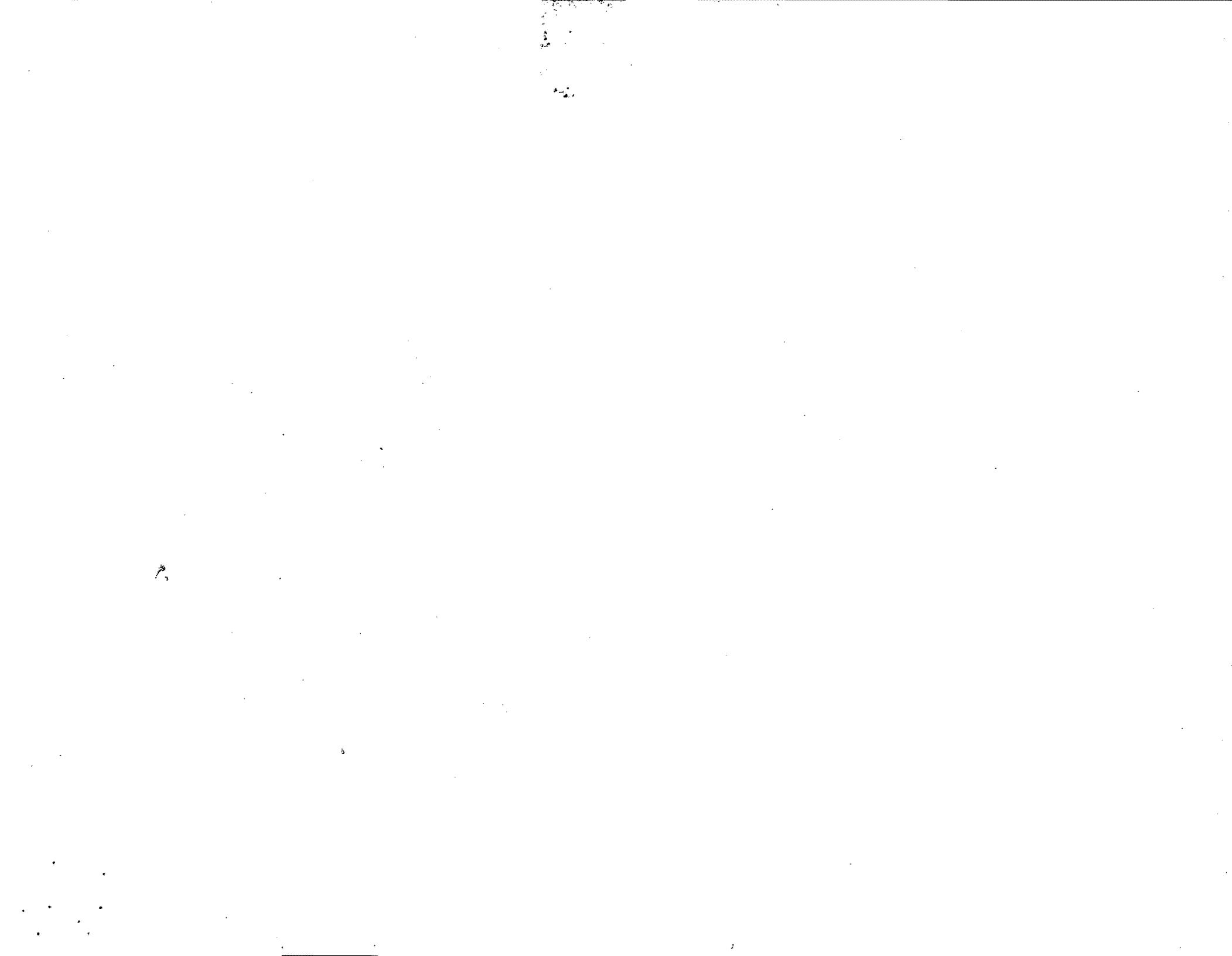
DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	
MFG. APPR.		REV. H	
APPROVED		D3391	
DE APPR.		SHEET 3 OF 8	
		TITLE	SCALE
		412 FLOAT SKIDTUBE	NTS
		DATE	08.08.20

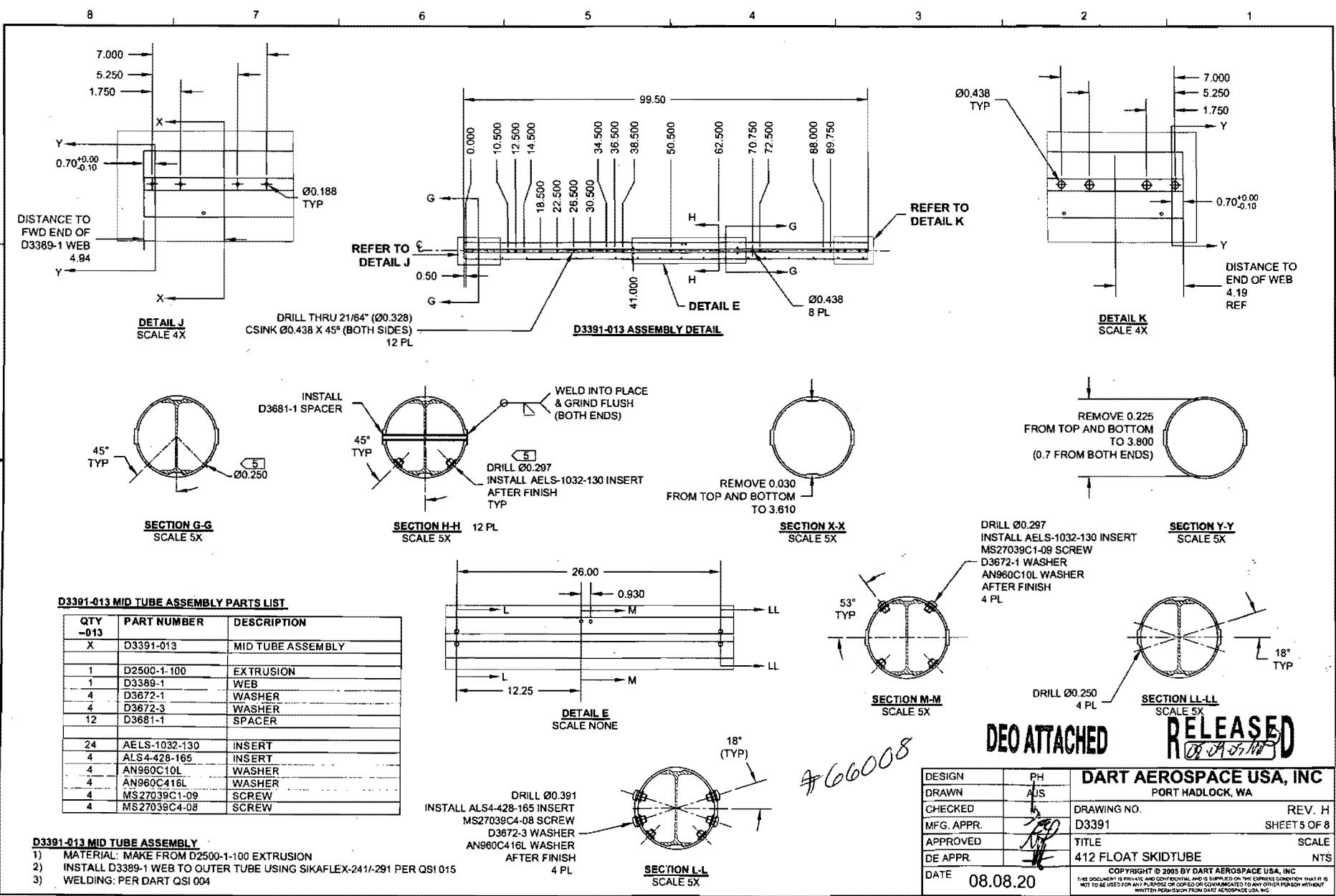
COPYRIGHT © 2005 BY DART AEROSPACE USA, INC.
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS
NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT
WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

8 7 6 5 4 3 2 1

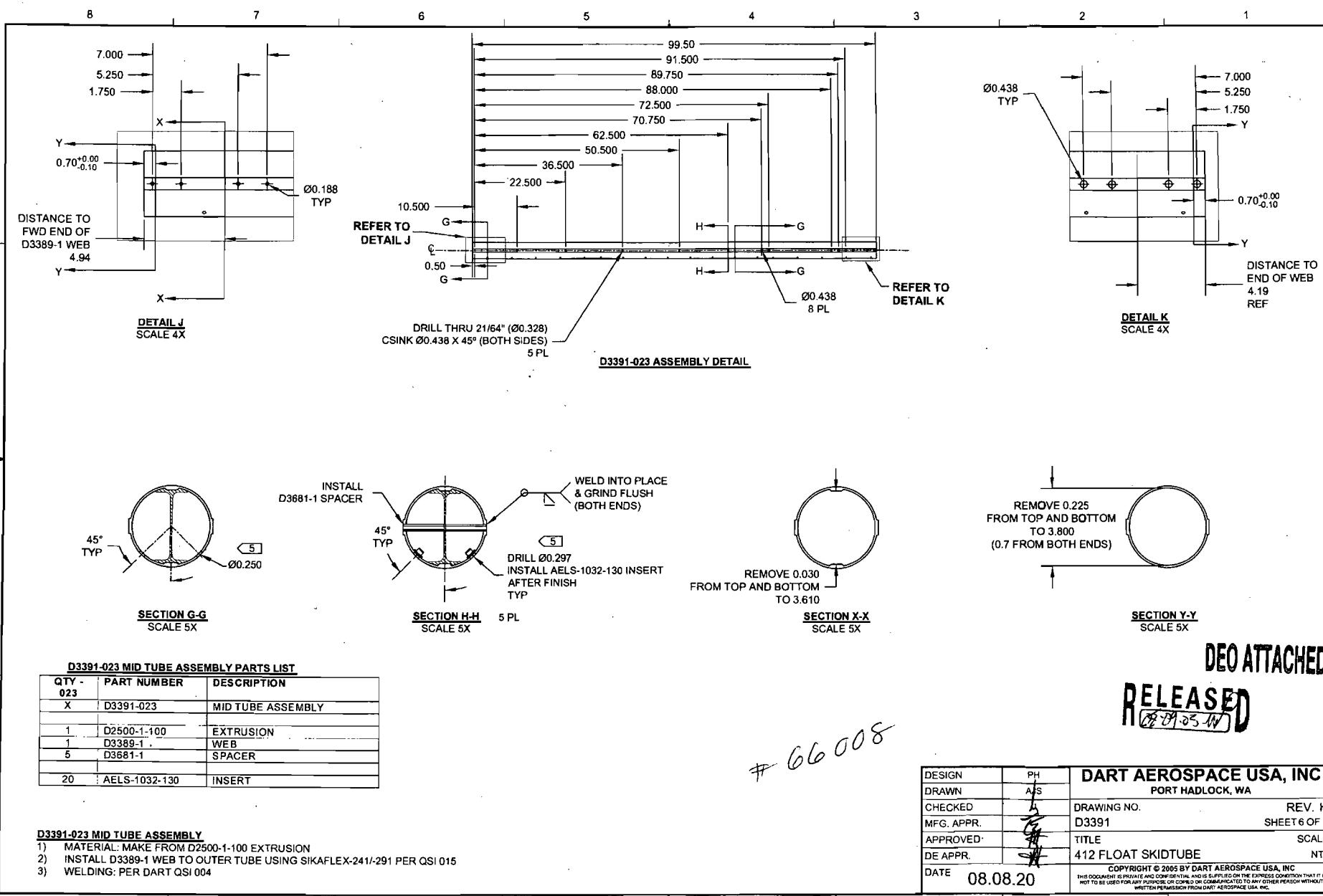


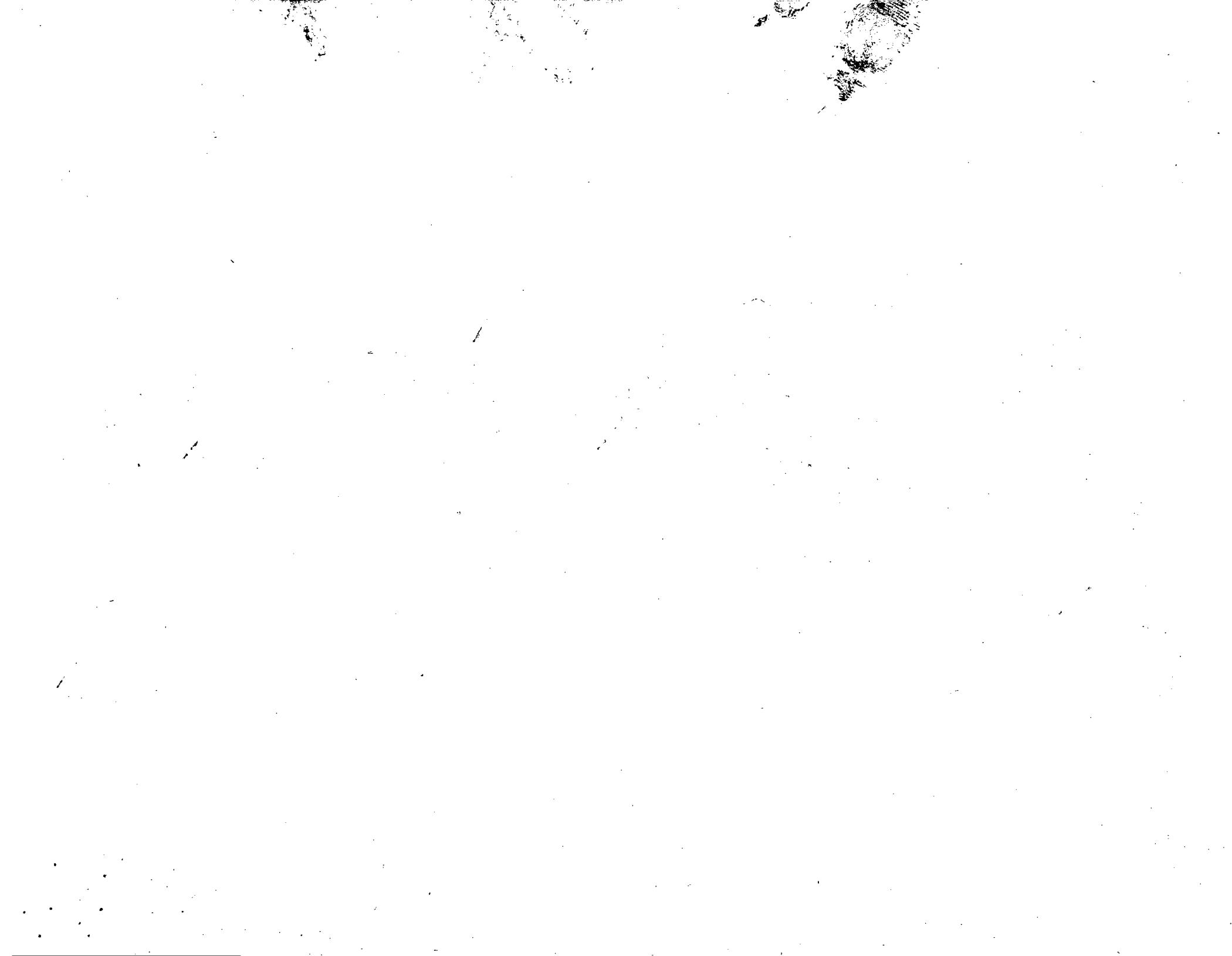


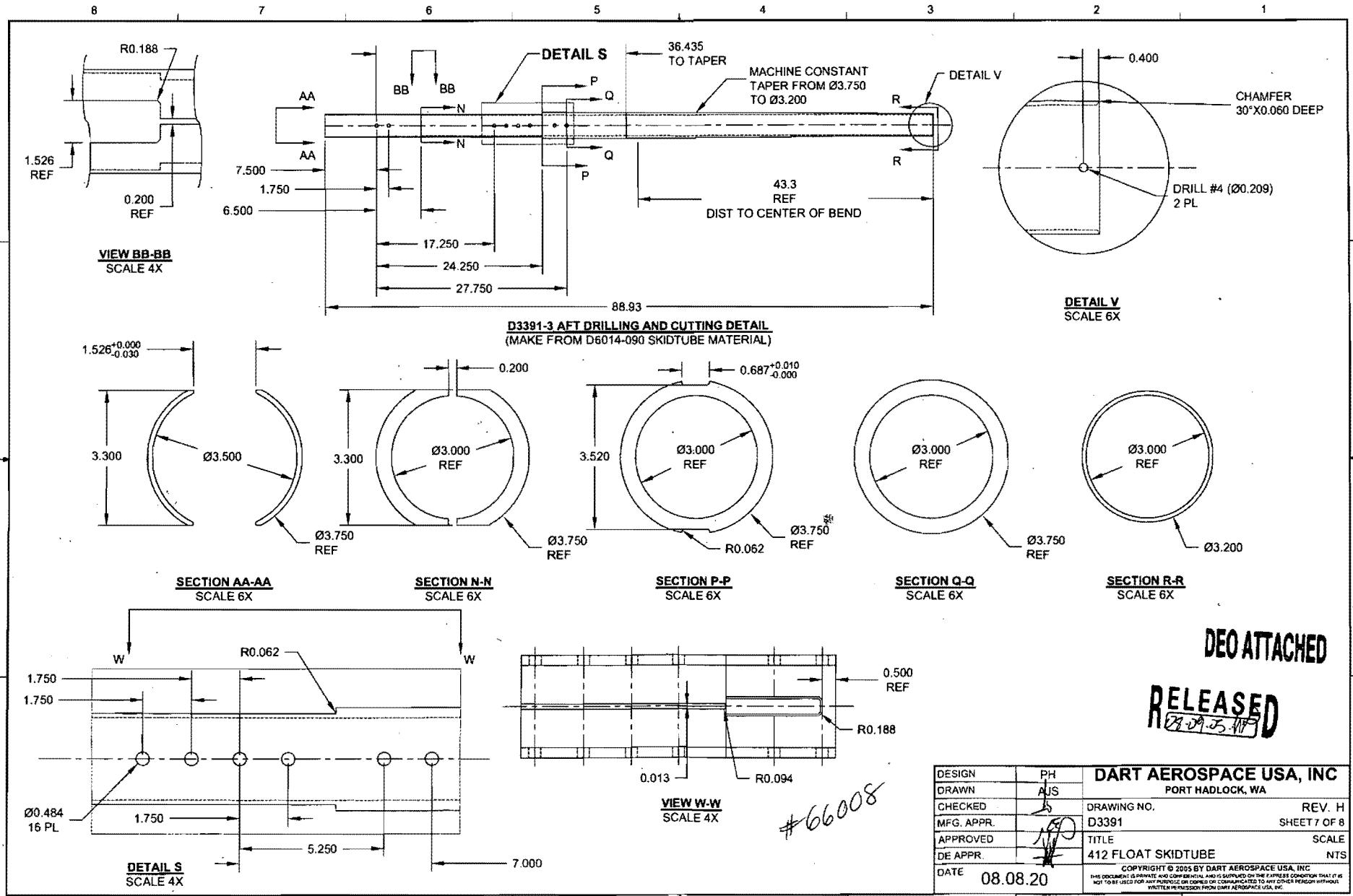


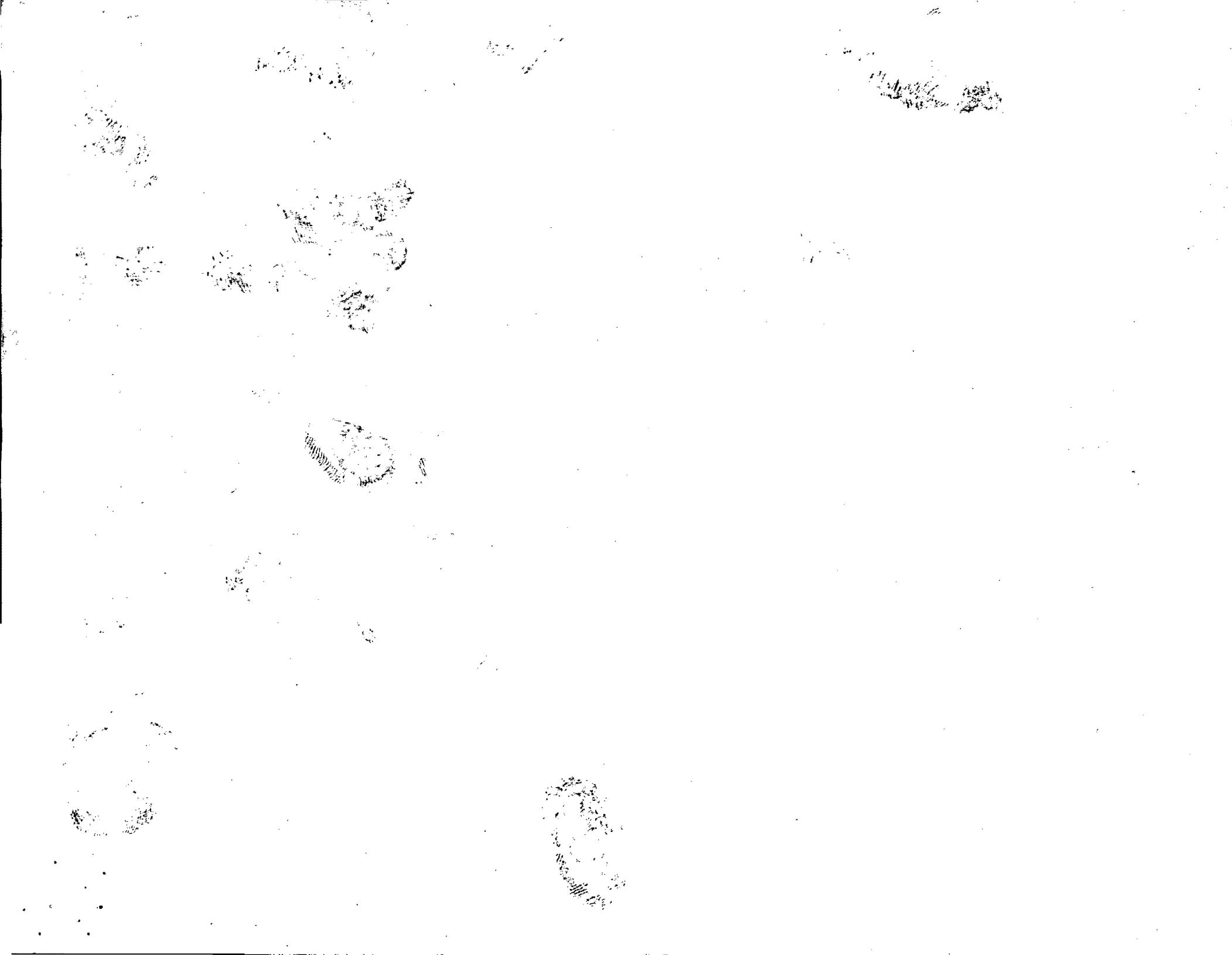


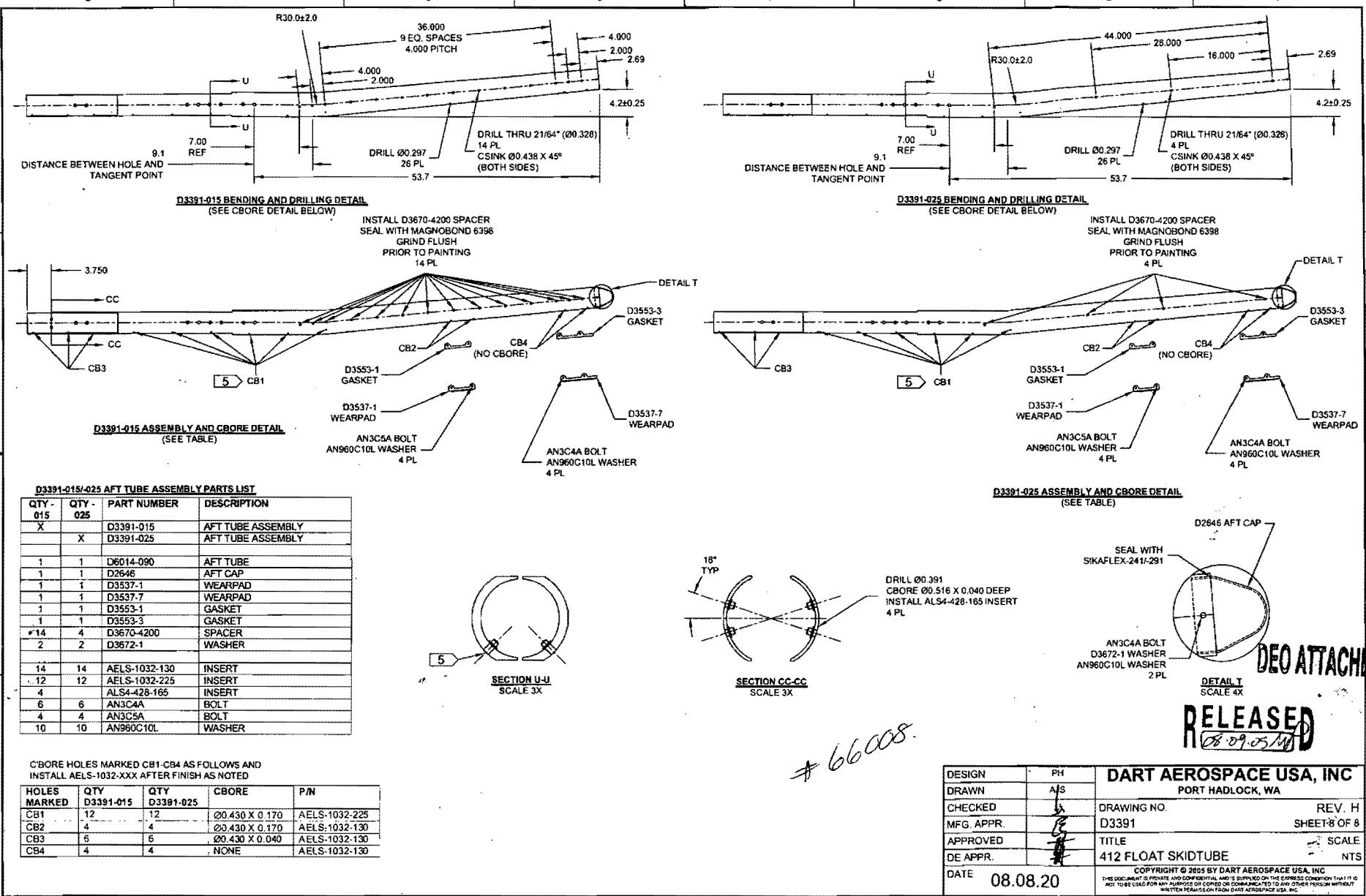


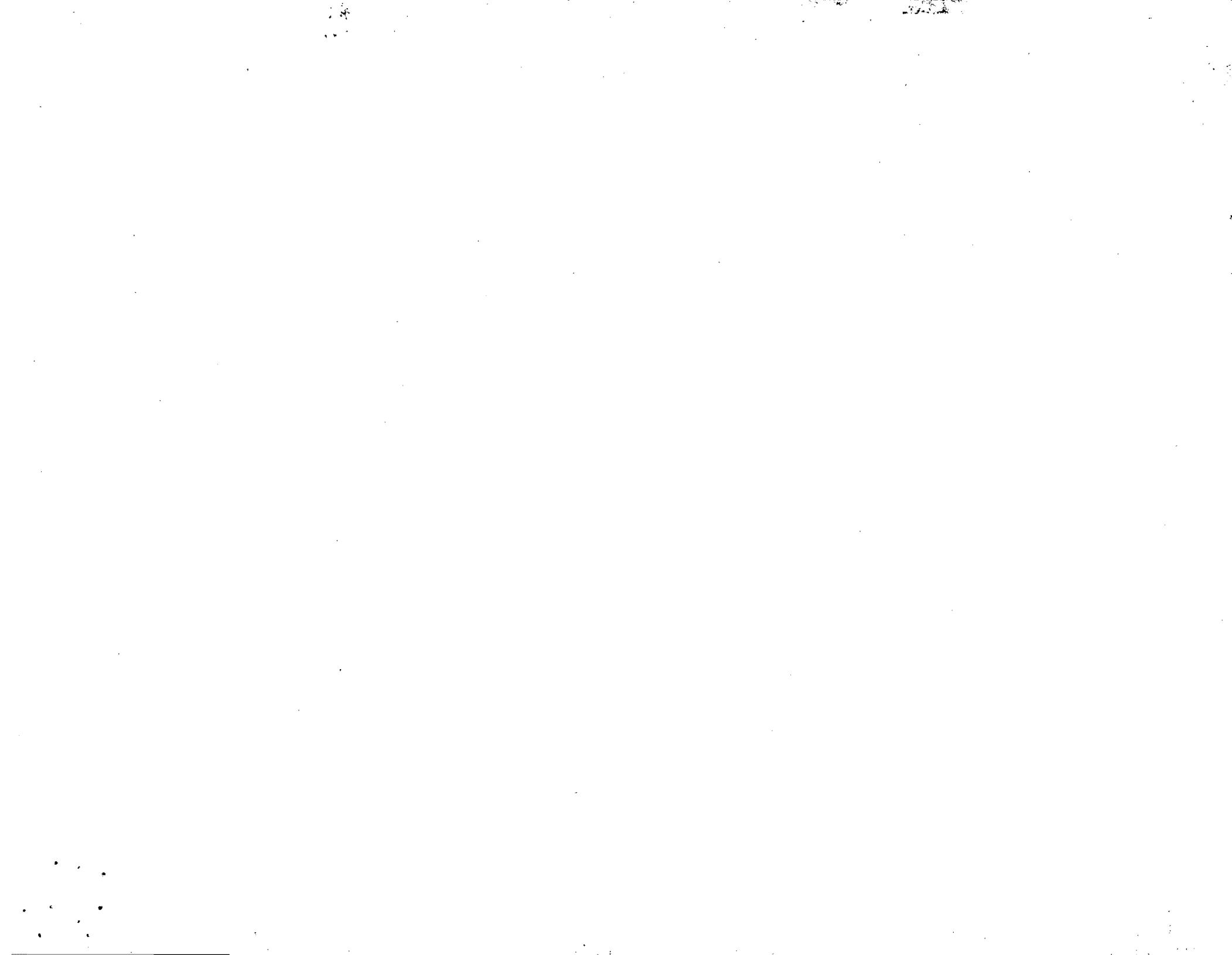












DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER	D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>CP</i>	CHECKED <i>AA</i>	MFG. APPR.	APPROVED <i>ML</i>	DE APPR. <i>HP</i>		
DATE 09.09.23	DATE 04.04.24	DATE 09/09/25	DATE 09/09/30	DATE 09/09/30	DATE 09/09/30	

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS.~~ COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

R E L E A S E D
2010 -02- 02

MP

#66008

